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cc K. Mutz, J. Whitehead

STATE OF UTAH
NATURAL RESOURCES
Wildlife Resources

Norman H. Bangerter, Governor
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Southeastern Region • 455 West Railroad Avenue • Price, UT 84501-2829 • 801-637-3310

January 13, 1986

Mel Swanson, Chief Engineer
Kelmine Corp.
P.O. Box 1383
Moab, UT 84532

Dear Mr. Swanson:

In regards to the request for wildlife information relative to your copper mine (SW Sec. 25, SE Sec. 26, NE Sec. 35, and Nw Sec. 36, San Juan County, Utah) on BLM and State land in Lisbon Valley, the following is offered.

The mine property and adjoining environs located at an average elevation of 6,500 feet represent sagebrush/grass and pinion/juniper ecosystems within a submontane ecological association. This environment has potential to be inhabited by 391 species of vertebrate wildlife (no picinian, 9 amphibians, 29 reptilians, 263 avian and 91 mammalian species). We are especially concerned for potential impacts to mule deer, Rocky Mountain elk and bald eagles. These three animals are of high interest and the bald eagle is endangered. Habitats associated with the property represent high-priority valued winter range (December 1, through April 15) for deer, substantial valued yearlong range for elk and substantial valued winter range (November 1, through March 31) for bald eagles. (For purposes of clarification, critical valued habitats are the most important, followed in respective order by high-priority, substantial and limited.)

As we understand the project, ore from an earlier developed copper mining era will be strip mined, then restacked in such a way that they can be wetted with a sulfuric acid solution and the leached solution recovered for use as a fungicide (copper sulfate hydroxil) and fertilizer (ammonium sulfate). Operations will require two series of ponds, each series approximating one acre in size with ph's of 2 and 7. The existing spoil areas and newly created tailings, along with disturbed areas are to be revegetated. Additionally, it is our understanding that top soil from newly disturbed areas will be stockpiled for later revegetation efforts. The mine will operate 24 hours per day, seven days per week and will employ approximately 25 personnel over a period of 15 years. Surface disturbed areas will approximate 100 acres.

It is recommended that all mine personnel be advised by the company to not unnecessarily disturb wildlife they encounter during routine operations. This should include travel between home and the mine since

high valued habitats will be crossed on a daily basis by traveling workers. Such action will result in avoidance of some impacts to the local areas wildlife.

Top soil storage areas should be promptly revegetated in order to preclude loss of the soil to erosion. As mining operations progress, contemporaneous reclamation and revegetation of disturbed areas with plant species suitable for big game should ensue. Where slopes are less than 10 percent, revegetation should be accomplished through drill seeding followed by mulching; on steeper slopes, hydromulching is recommended. It is recommended that recontouring, where necessary, achieve slopes not steeper than 3:1 (15° or 30%). The attached revegetation methodolgy is recommended.

Ponds with ph less than 6 needs to be secured such that no wildlife can access the water. An eight-foot tall hog-wire fence is recommended with 24 inches of chicken wire around the bottom. Additionally, a grid of wire with metal streamers hanging down needs to be arranged over the pond(s) to preclude use by migratory avifauna. Also, the toxic and hazardous materials storage/circulation process in the plant operations needs to be safeguarded such that a catastrophe will not allow any environmental contamination to leave the permit area.

Dust control is anticipated, since vegetation adjacent to potential dust sources (roads, ore stock piles, etc.) would become temporarily coated and temporarily unpalatable to foraging wildlife.

The Division's expertise is available for your counsel as a service of state government. Please coordinate, as needed, with Larry Dalton (telephone 637-3310), our Regional Resource Analyst, located in Price, Utah, and/or Guy Wallace (telephone 587-2643), our local Conservation Officer, located in Monticello, Utah. Good luck!

Sincerely,

John by JBDalton

John Livesay, Supervisor
Southeastern Region

JL/LBD/dd

cc: Darrell Nish
John Whitehead
Charlie Dietz
Guy Wallace
Terry McFarland
Stan Baker

Attachment

Recommended revegetation methodology for Kelmine Corporation's copper mine in Lisbon Valley, Utah. Site preparation must include double ripping followed by discing of fertilizer (0-16-8) at a rate of 100 lb/acre into the top soil mass. Seeding should immediately follow site preperation and must occur in the fall after a permanent killing frost. Application of seed through a dual hydro seed/mulch technique (tackifyer @ 40 lb/acre w/seed mix followed by tackifyer @ 60 lb/acre w/2000 lb/acre woodfiber mulch and 100 lb/acre 33-0-0 fertilizer) is a preferred technique. Drill seeding may give satisfactory results on slopes less than 10%. Irregardless of technique, all seeds except those denoted (**) must be covered.

Plant Species	Pounds/Acre (pure live seed except as noted)
Piute orchardgrass	1*
Russian Wildrye	3*
Epharaim crested wheatgrass	1*
Pubescent wheatgrass	2*
Bluestem wheatgrass	1*
Bearded bluebunch wheatgrass	1*
Smooth brome (Lincoln variety)	2*
Utah sweetvetch	1
Chickpea milkvetch	1
Alfalfa (rambler, nomad, travois and ladak in equal parts)	3*
Yellow sweetclover	2*
Small burnett	3*
Kochia (prostrata)**	1*
Pacific aster	1
Palmer penstomen	1
White-stemmed rabbitbrush (10% purity)**	1
Fourwing saltbush	2
Wyoming big sagebrush (10% purity)**	1
Woods rose	2
Total	30

* Top soil in storage areas should be stabilized by seeding these species per the recommended technology.